

# Sample Paper IX to X Moving

Time: 2 Hours | Max. Marks: 100



- 1. Answers are to be given in the separate **OMR** sheet.
- Don't break the seal unless you're instructed to do so. If the seal is broken before the scheduled time, penalty will be minus 10 marks.
- There are 100 questions in this test paper. All questions are compulsory. Questions numbered 1 to 20 belong to Science, 21 to 35 pertain to Mathematics, 36 to 50 belong to Social Science and 50-100 are on Mental Ability.
- 4. Please ensure that the question paper you have received contains all the questions in each section and pages. If you find any mistake like missing question or pages then contact the invigilator, immediately.
- 5. Please follow the instructions given on the OMR sheet for marking the answers.
- Write your nine-digit registration number, allotted to you in the admit card, clearly on the test-booklet.
- 7. Rough work can be done anywhere in the booklet but not on the OMR sheet /loose paper.
- 8. Each correct answer will be awarded one mark.
- 9. There is no negative marking.
- 10. Please return, only the OMR sheet to the invigilator, after the test.
- 11. Use black/blue ball point pen only provided in the examination hall.
- 12. Write your registration number very clearly (only one digit in one block) on this booklet.
- Answer each question, by darkening the correct alternative among the four choices on the OMR Sheet as shown below.

Correct way:	Q.No.	Alternatives						
	1	1	2		4			
Wrong way:	Q.No.		Alterna					
	1	$\otimes$	<del>2</del>	(3)	4			

- 14. Since the time allotted for this question paper is very limited and all questions carry equal marks, you should make the best use of it by not spending too much time on one question. Time permitting, you can come back to the question, which you have left in the first instance and try them again.
- 15. Use of whitener/white fluid, is strictly prohibited, on the OMR sheet, for changing the answer.

Note: Please turn over the page and start answering only after you are asked to do so.

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## Scholastic Aptitude Test (SAT)

- 01. The S.I. unit of weight is
  - (1)  $ms^{-1}$
- $(2) ms^{-2}$
- (3) Nm
- (4) N
- 02. As we go from equator to the poles, the value of g
  - (1) Remains the same
  - (2) Decreases
  - (3) Increases
  - (4) Decreases up altitude of 45°
- 03. Gravitational force is a
  - (1) Repulsive force
  - (2) Action at a distance force
  - (3) Neither (1) nor (2)
  - (4) Both (1) and (2)
- 04. A body weights 72 N on the surface of the earth. What is the gravitational force on it due to earth at a height equal to half the radius of the earth from the surface?
  - (1) 72 N
- (2) 28 N
- (3) 16 N
- (4) 32 N

(3)  $\frac{R}{2}$  (4)  $\frac{R}{4}$ 

- 05. If R is the radius of the earth, the height at which the weight of a body becomes 1/4 its weight on the surface of the earth is
  - (1) 2R (2) R
- 06. The value of g is
  - (1) Maximum at equator
  - (2) Minimum at equator
  - (3) Same everywhere
  - (4) Minimum at poles
- 07. An astronaut in the orbit in a spacecraft feels weightlessness
  - (1) Due to the absence of gravity inside
  - (2) Due to the fact that spacecraft has no energy
  - (3) Because acceleration in the orbit is equal to acceleration of gravity outside
  - (4) There is no gravity outside

- 08. The mass number of the element is
  - (1) the sum of the number of electrons and protons
  - (2) the sum of the number of protons and neutrons
  - (3) the number of neutrons
  - (4) the number of protons
- 09. What is the value of Avogadro's number?
  - (1)  $6.02 \times 10^{-23}$
- (2)  $6.02 \times 10^{23}$
- (3)  $6.02 \times 10^{-22}$
- (4)  $6.02 \times 10^{22}$
- 10. Which of the following statement about the electron is incorrect?
  - (1) It is a negatively charged particle
  - (2) The mass of the electron is equal to the mass of the neutron
  - (3) It is a basic constituent of all atoms
  - (4) It is a constituent of cathode rays
- 11. Which of the following is not a homogeneous mixture?
  - (1) Air
- (2) Tincture of iodine
- (3) Sugar solution (4) milk
- 12. The atomic symbol of silver is \_\_\_\_\_
  - (1) Si
- (2) S
- (3) Au (4) Ag
- 13. What is the statement?
  - "10 percent glucose in water by mass" signifies
  - (1) 10 gram of glucose dissolved in 100 gram of water
  - (2) 10 gram of glucose dissolved in 90 gram of
  - (3) 20 gram of glucose dissolved in 200 gram of
  - (4) 20 gram of glucose dissolved in 90 gram of water
- 14. During summer, water kept in an earthen pot becomes cool because of the phenomenon of
  - (1) diffusion
- (2) transpiration
- (3) osmosis
- (4) evaporation





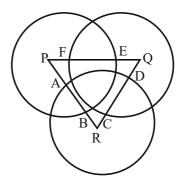


- 15. Manure differs from fertilizers because it
  - (1) contains a large amount of inorganic matter
  - (2) contains a large amount of organic matter
  - (3) reduces the fertility of soil
  - (4) causes water pollution
- 16. Intervarietal hybridisation is the process of crossing
  - (1) different varieties of plants
  - (2) the same variety of plants
  - (3) two different divisions of same kingdom
  - (4) two different divisions of different kingdoms
- 17. Read the following statements and write the appropriate term against each I,

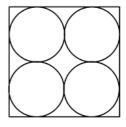
I control the functions of a cell. Who am I?

- (1) Neuron
- (2) Nucleus
- (3) Chloroplast
- (4) Mitochondria
- 18. Who component of a plant cell gives it rigidity and shape?
  - (1) Cell wall
  - (2) Cell membrane
  - (3) Nucleus
  - (4) All of the above
- 19. Which of the following is the characteristic feature of cardiac muscles?
  - (1) Cylindrical, branched and uninucleate
  - (2) Long, pointed and uninucleate
  - (3) Long, cylindrical and unbranched
  - (4) Cylindrical, unbranched and multinucleate
- 20. Which of the following tissues include bones and cartilage?
  - (1) Muscle tissue
  - (2) Nervous tissue
  - (3) Epithelial tissue
  - (4) Connective tissue

21. Three circles, each of radius 20, have centres at P, Q and R. Further AB = 5, CD = 10 and EF = 12, What is the perimeter of  $\triangle PQR$ ?



- (1) 120
- (2) 66
- (3) 93
- (4) 87
- 22. Four identical coins are placed in a square. For each coin the ratio of area to circumference is same as the ratio of circumference to area. Then find the area of the square that is not covered by the coins.



- (1)  $16(\pi-1)$
- (2)  $16(8-\pi)$
- (3)  $16(4-\pi)$
- (4)  $16\left(4-\frac{\pi}{2}\right)$
- 23. A teacher teaches math to 15 students. He was grading test and found when he graded every one's test except student A, the average for the class was 80. After he graded A's test the test average become 81. What was A's score on the test?
  - (1) 81
- 95 (2)
- (3) 85
- (4) 91





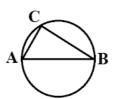


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- 24. If Sukriti borrows ₹8000 for two years at the rate of 10% per annum compound interest, then the amount to be paid by her at the end of two years to clear the debt is
  - (1) ₹8800
- (2) ₹9600
- (3) ₹9680
- (4) ₹102400
- 25. Which of the following is equal to

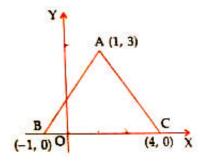
$$\sqrt{9-6\sqrt{2}} + \sqrt{9+6\sqrt{2}}$$

- (1)  $3\sqrt{2}$
- (2)  $2\sqrt{6}$
- $(3) \ 3\sqrt{3}$
- 26. Three circles A, B & C have a common centre O. A is the inner circle, B is middle circle and C is outer circle. The radius of the outer circle OP cuts the inner circle at X and middle circle at Y such that OX = XY = YP. The ratio of the area of the region between the inner and middle circles to the area of the region between the middle and outer circle is.
  - (1)  $\frac{1}{3}$  (2)  $\frac{2}{5}$  (3)  $\frac{3}{5}$  (4)  $\frac{1}{5}$
- 27. The figure shows a circle of diameter AB and radius 6.5 cm. If chord CA is 5 cm long, find the area of  $\triangle ABC$ .



- (1) 60 sq. cm
- (2) 40 sq.cm
- (3) 30 sq. cm
- (4) 52 sq. cm
- 28. If n is any odd integer greater than 1, then  $n(n^2-1)$ is always divisible by
  - (1) 96
- (2) 48
- (3) 72
- (4) 24

- 29. The speed of a railway engine is 42 kmph, when no compartment is attached, and the reduction in speed is directly proportional to the square root of the number of compartments are attached. If the speed of the train carried by this engine is 24 kmph when 9 compartments are attached, the maximum number of compartment that can be carried by the engine is
  - (1) 49
- (2) 48
- (3) 46
- (4) 47
- 30. Sum of digits of a two digit number is 8. If the number obtained by reversing the digits is 18 more than the original number, then the original number is
  - (1) 35
- (2) 53
- (3) 26 (4) 62
- 31. If the distance between the points (2, -2) and (-1, x) is 5 units, then one of the value of x is
- (2) 2
- (3) -1
- 32. In the adjoining figure, the area of the triangle ABC



- (1) 15 sq. units
- (2) 10 sq. units
- (3) 7.5 sq. units
- (4) 2.5 sq. units
- 33. If 2 is a root of the quadratic equation  $2x^2 - kx + 1 = 0$ , then the value of k is

- (1) 9 (2) -9 (3)  $\frac{9}{2}$  (4)  $-\frac{9}{2}$







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- 34. The age of a women is four times the age of her daughter. Five years hence, the age of the women will be three times the age of her daughter. The present age of the daughter is
  - (1) 40 years
- (2) 20 years
- (3) 15 years
- (4) 10 years
- 35. If a man invests ₹12000 for two years at the rate of 10% per annum compound interest, then the compound interest earned by him at the end of two years is
  - (1) ₹2400
- (2) ₹2520
- (3) ₹2000
- (4) ₹1800
- 36. Which of the following is not a tributary of Godavari?
  - (1) Purna
  - (2) Wardha
  - (3) Wainganga
  - (4) Lohit
- 37. Disguised unemployment occurs when the number of persons working on a farm is
  - (1) only what is required
  - (2) more than required
  - (3) less than required
  - (4) None of the above
- 38. Which one of the following is not a tributary of the River Ganga?
  - (1) Yamuna
- (2) Beas
- (3) Ghaghra
- (4) Kosi
- 39. Which one of the following statements about the river Narmada is not true?
  - (1) It flows through a rift valley
  - (2) It flows through a gorge near Jabalpur
  - (3) It plunges over steep rocks at the Dhuadhar
  - (4) Its tributaries are Tungabhadra and Musi

- 40. Which place is located on the water divide between the Indus and the Ganga river system?
  - (1) Ambala
- (2) Nainital
- (3) Haridwar
- (4) Allahabad
- 41. A narrow channel of sea separating two landmasses is called:
  - (1) Gulf
- (2) Strait
- (3) Isthmus
- (4) Bay
- 42. Which of the following is grown in the rainy season?
  - (1) Jowar and Bajra (2) Wheat
  - (3) Gram
- (4) All of the above
- 43. HYV seeds stands for
  - (1) Heavy yielding variety seeds
  - (2) High yielding variety seeds
  - (3) Half yielding variety seeds
  - (4) None of the above
- 44. Which among the following states was first to try out the modern farming methods in India?
  - (1) Haryana
- (2) Jharkhand
- (3) Bihar
- (4) Odisha
- 45. Which of the following sectors is related to agriculture, forestry and dairy?
  - (1) Primary Sector
  - (2) Tertiary Sector
  - (3) Secondary Sector
  - (4) None of the above
- 46. Who wrote the pamphlet called what is the third estate?
  - (1) Abbe Sieyes
  - (2) Rousseau, a philosopher
  - (3) Mirabeau, a nobleman
  - (4) Montesquieu













- 47. The power and independence of Election Commission (EC) of India is equivalent to which one of the following:
  - (1) Governor
  - (2) Assistant Commissioner of Police
  - (3) Judiciary
  - (4) National Human Rights Commission
- 48. For how long can the Rajya Sabha delay a Money Bill?
  - (1) 7 days
- (2) 14 days
- (3) 15 days
- (4) 1 month
- 49. Tsarina Alexandra was of the
  - (1) German origin (2) French origin
  - (3) Russian origin (4) Dutch origin
- 50. When was the Indian Constitution adopted?
  - (1) 26th November, 1950
  - (2) 26th November, 1949
  - (3) 26th November, 1948
  - (4) 26th November, 1951









## **Mental Ability Test (MAT)**

- **Directions (51-55):** In the following question in certain code language if '+' means 'x', '-' means '+', 'x' means '÷', and '÷' means '-', then answer the following questions.
- 51.  $16 + 2 3 \div 4 = ?$ 
  - (1) 31
  - (2) 26
  - (3) 15
  - (4) None of these
- 52.  $9 + 3 \div 18 \times 3 + 4 = ?$ 
  - (1) 30
- (2) 3
- (3) 13
- (4) 0
- 53.  $28 \div 36 49 \times 7 + 2 = ?$ 
  - (1) 12
- (2) 10
- (3) 8
- (4) 6
- 54.  $171 \times 57 \div 279 \times 93$ 
  - (1) 250
- (2) 253
- (3) 252
- (4) 0
- 55.  $8 \div 6 9 \times 12 + 4$ 
  - (1) 5
- (2) 7
- (3) 9
- (4) 13
- 56. One morning after sunrise Juhi while going to school met Lalli at Boring road crossing. Lalli's shadow was exactly to the right of Juhi. If they were face to face, which direction was Juhi facing?
  - (1) South
- (2) North
- (3) South-West
- (4) North-East
- 57. How many '8's are there in the following sequence which are preceded by '5' but not followed by '3'? 583758638545847655835875828 5
  - (1) 2
- (2) 3
- (3) 4
- (4) 5

- 58. How many '6's are there in the following sequence which are followed by 3 and preceded by 8? 748632718689813689786313684 3 2 3
  - (1) 2
- (2) 3
- (3) 4
- (4) 5
- 59. B is Father of 'C', but 'C' is not son of 'B'. What is the relation of 'C' to 'B'?
  - (1) Father
  - (2) Mother
  - (3) Daughter
  - (4) Niece
- 60. Pointing towards Mohan, 'Ram' says 'He is the son of the only daughter of my grandfather'. How is 'Ram' related to 'Mohan'?
  - (1) Uncle
- (2) Father
- (3) Brother
- (4) Son
- 61. Mohammad walks 15 meters towards the west, then turns to the right and walks 15 meters. Now he turns towards left and walks 10 meters, then again turns towards left and walks 15 meters. Finally he turns to the left and walks 45 meters and stops. What is the distance between this position and starting point and in which direction from the starting point he is?
  - (1) 20 meters East
  - (2) 25 meters East
  - (3) 20 Meters West
  - (4) 30 Meters East
- 62. Starting from point 'P', Raj walked 30 m towards South. He then turned left and walked 40 m. He then turned left and walked 30 m. He again turned left and walked 50 m and reached a point Q. How far and in which direction is the Point Q from P?
  - (1) 20 meter West
  - (2) 10 meter East
  - (3) 10 meter West
  - (4) 10 meter North







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**Direction (63-64):** Study the following information and answer the following questions.

A college has 63 students studying Political Science, Chemistry and Botany. 33 students study Political Science, 25 Chemistry and 26 Botany. 10 study Political Science and Chemistry, 9 study Botany and Chemistry while 8 study both Political Science and Botany. Same number of students study all three subjects as those who learn none of the three.

- 63. How many students study all the three subjects?
  - (1) 2
- (2) 3
- (3) 5
- (4) 7
- 64. How many students study only one of the three subjects?
  - (1) 21
- (2) 30
- (3) 39
- (4) 42
- 65. Which year will have the same calendar as 2001?
  - (1) 2011
- (2) 2013
- (3) 2009
- (4) 2007

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- 66. Which day of the week was 23rd July 1976?
  - (1) Tuesday
  - (2) Wednesday
  - (3) Thursday
  - (4) Friday
- 67. Five days ago Shweta lost her phone. Two days after losing the phone she lodged a complaint with police. Six days after lodging the complaint she bought a new phone. four days after buying a new phone i.e., on a Thursday she found her old phone. On which day did she lose her phone?
  - (1) Friday
  - (2) Saturday
  - (3) Thursday
  - (4) Tuesday

68. Choose the pair in which the words are differently related from the rest.

(1) Shirt: Dress

(2) Boy: Girl

(3) Mango: Fruit

(4) Table: Furniture

- 69. Choose an odd man out.
  - (1) 35
- (2) 8
- (3) 14
- (4) 15

**Directions (70-71):** In each question below are given two statements followed by two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusion and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.

70. Statements: All bags are books. All pencils are books.

#### **Conclusions:**

- Some pencils are bags.
- II. No pencil is bag.
- (1) Only conclusion II follows
- (2) Only conclusion II follows
- (3) Either I or II follows
- (4) Neither I nor II follows
- 71. Statements: All mangoes are golden in colour. No golden-coloured things are cheap.

#### **Conclusions:**

- All mangoes are cheap. I.
- II. Golden-coloured mangoes are not cheap.
- (1) Only conclusion I follows
- (2) Only conclusion II follows
- (3) Either I or II follows
- (4) Neither I nor II follows









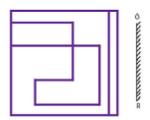
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- 72. In a class of 35 students, Kunal is placed seventh from the bottom whereas Sonali is placed ninth from the top. Pulkit is placed exactly in between the two. What is Kunal's position from Pulkit?
  - (1) 9
- (2) 10
- (3) 11
- (4) 13
- 73. In a queue, A is eighteenth from the front while B is sixteenth from the back. If C is twenty-fifth from the front and is exactly in the middle of A and B, then how many persons are there in the queue?
  - (1) 45
- (2) 46
- (3) 47
- (4) 48
- 74. If it is possible to make a meaningful word with the first, the fourth, the seventh and the eleventh letters of the word INTERPRETATION. which of the following will be the third letter of that word? If more than one such word can be made, give 'M' as the answer and if no such word can be made, give 'X' as the answer.
  - (1) I
- (2) R
- (3) X
- (4) M
- Direction (75 to 79): Study the following information to answer the given questions.

Seven Persons namely A, B, C, D, E, F and G are seated in a straight line facing north but not necessarily in the same order. Only three people sit between F and A. Neither F nor A sit at the extreme ends of the line. Only two people sit between A and G. E is not an immediate neighbour of either A or F. E sits third to the left of B. B is not an immediate neighbour of A. E is not an immediate neighbour of C.

- 75. Who are the immediate neighbours of A?
  - (1) BG
- (2) CD
- (3) GD
- (4) EF

- 76. Identify the wrong pair:
  - (1) DG
- (2) FE
- (3) DE
- (4) BG
- 77. Who are the immediate neighbours of F?
  - (1) AG
- (2) CD
- (3) DG
- (4) GB
- 78. Who are the immediate neighbours of E?
  - (1) CD
- (2) FG
- (3) DG
- (4) FB
- 79. Who sits third to the right of A?
  - (1) C
- (2) E
- (3) B
- (4) G
- 80. Identify the mirror image of the following figure when the mirror is placed to the right of the figure.













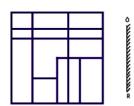








81. Identify the mirror image of the following figure when the mirror is placed to the right of the figure.

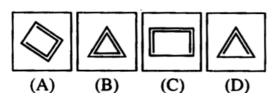




- 82. Out of the given answer figures, which is the correct one to replace the question mark? Question Figure:



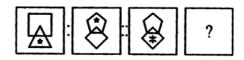
Answer Figures:



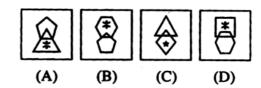
- (1) A
- (2) B
- (3) C
- (4) D

83. Out of the given answer figures, which is the correct one to replace the question mark?

Question Figure:



**Answer Figures:** 



- (1) A
- (2) B
- (3) C
- (4) D
- 84. What will be next in the sequence out of the given answer figures?



- **界** 条 (1) ጸጸየ
- (2) ጸጸ
- ጸ ጸ (3) ጸጸጾ
- ጸ ጸ





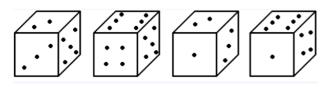


What is the possible value of P?

- (1) 1
- (2) 5
- (3) 6
- (4) Cannot be determined
- 86. You are given three positions of dice then which face is opposite to the face with alphabet B?



- (1) E
- (2) F
- (3) D
- (4) A
- 87. Among all, how many dots will be three to the face which is having 2 dots?



- (1) 6
- (2) 5
- (3) 4
- **(4)** 1
- 88. 'Wax' is related to 'Grease' in the same way as 'Milk' is related to:
  - (1) Drink
  - (2) Ghee
  - (3) Protein
  - (4) Curd

- 89. 'Wax' is related to 'Run' in the same way as 'Breeze' is related to:
  - (1) Cold
- (2) Dust
- (3) Wind
- (4) Air

Directions (90 to 94): In each question there is a number series with one term missing shown by question mark (?). This term in one of the alternatives among the four numbers given under it. That number is -

- 90. 7, 14, 19, 38, 44, 88, 95, (?)
  - (1) 84
- (2) 190
- (3) 155
- (4) 198
- 91. 66, 46, 34, 22, (?)
  - (1) 32
- (2) 72
- (3) 14
- (4) 15
- 92. 4, 7, 6, 4, 11, -3, 22, (?)
  - (1) -16
- (2) 08
- (3) -12
- (4) 15
- 93. 0, 3, 9, 21, (?), 48
  - (1) 25
- (2) 27
- (3) 33
- 29 (4)
- 94. 14, 7.5, 8.5, 14.25, (?), 78.75
  - (1) 61
- (2) 30.5
- (3) 42.25
- (4) 21.75

Directions (95 to 99): These questions consist of a number series which contains a wrong term. This term is given as one of the four alternatives among the four numbers given below. The wrong term is

- 95. 10, 13, 14, 17, 19, 21, 22
  - (1) 13
- (2) 22
- (3) 21
- (4) 19
- 96. 8, 11, 17, 23, 26, 30, 38
  - (1) 23
- (2) 26
- (3) 30
- (4) 38







- 97. 255, 366, 478, 684, 891
  - (1) 891
- (2) 478
- (3) 684
- (4) 366
- 98. 7, 13, 19, 31, 50, 81, 131
  - (1) 19
- (2) 81
- (3) 13
- (4) 31
- 99. 1, 6, 40, 120, 360, 720, 720
  - (1) 120
- (2) 1
- (3) 6
- (4) 40

**Direction:** Following question consists of four groups. One set is different from the other three in some way. Find out the different set -

- 100.(1) KLRQ
- (2) EFIH
- (3) PQWV
- (4) MNLK













# सिर्फ तैयारी के लिए ज़िन्दगी नहीं ज़िन्दगी के लिए तैयारी





## घर के पास सफलता और संस्कार

Batch: IX to X Moving

ANSWER KEY														
01.	(4)	02.	(3)	03.	(3)	04.	(4)	05.	(2)	06.	(2)	07.	(4)	
08.	(2)	09.	(2)	10.	(2)	11.	(4)	12.	(4)	13.	(2)	14.	(4)	
15.	(2)	16.	(1)	17.	(2)	18.	(1)	19.	(1)	20.	(4)	21.	(3)	
22.	(3)	23.	(2)	24.	(4)	25.	(2)	26.	(3)	27.	(3)	28.	(4)	
29.	(2)	30.	(1)	31.	(2)	32.	(3)	33.	(3)	34.	(4)	35.	(2)	
36.	(4)	37.	(2)	38.	(2)	39.	(4)	40.	(1)	41.	(2)	42.	(1)	
43.	(2)	44.	(1)	45.	(1)	46.	(1)	47.	(3)	48.	(2)	49.	(1)	
50.	(2)	51.	(1)	52.	(2)	53.	(4)	54.	(4)	55.	(1)	56.	(1)	
57.	(3)	58.	(1)	59.	(3)	60.	(3)	61.	(1)	62.	(3)	63.	(2)	
64.	(3)	35.	(4)	66.	(4)	67.	(2)	68.	(2)	69.	(3)	70.	(3)	
71.	(2)	72.	(2)	73.	(3)	74.	(4)	75.	(2)	76.	(3)	77.	(4)	
78.	(3)	79.	(4)	80.	(4)	81.	(3)	82.	(4)	83.	(2)	84.	(3)	
85.	(3)	86.	(2)	87.	(1)	88.	(4)	89.	(3)	90.	(2)	91.	(3)	
92.	(1)	93.	(3)	94.	(2)	95.	(4)	96.	(3)	97.	(2)	98.	(3)	
99.	(4)	100.	(2)											

For any correction or query related to answer key, contact +91 81262 61333











